

Thomas Hardy, Provincial Geology, and the Material Imagination

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Victorian geology was ‘a ubiquitous and emblematic science’, and it was characterised perhaps more than any other Victorian science by its vibrant material culture.¹ Though literary criticism has almost exclusively focused on nineteenth-century geology’s production of ‘narratives’ of the history of the earth (in the shape of ‘progression’, ‘uniformitarianism’, ‘catastrophism’ and ‘evolution’, for example), in fact historians of science have demonstrated that the ‘central business’ of the science for its elite practitioners was not the formulation of laws of change or causation, but stratigraphy, the determination of the order and structure of the layers of rocks and fossils beneath the earth’s surface.² This project was rooted in the material objects of the science, often guided by the need to accurately predict the locations of lucrative coal-bearing and other mineral-rich sections of the strata. Furthermore, not only did the Geological Survey (f. 1835) direct important attention and resources to the practices of surveying and mapping, but in the early-to-mid- nineteenth-century the science was also integrally associated with palaeontology, and with the building of museums, collections, and exhibitions. It was in its focus on the material structure of the earth, rather than on its story, that geologists most radically reconfigured the Victorians’ apprehension of their position within time and space.

Given the intimate interrelationship between the history of evolutionary thought and the history of geology, it is perhaps unsurprising that literary critics have often considered geology using tools of analysis largely drawn from such influential studies of evolutionary biology and the novel as Gillian Beer’s *Darwin’s Plots* (1983) and George Levine’s *Darwin and the Novelists* (1988). Beer and Levine’s considerations of the ways in which literary narratives may have reflected, or drawn upon, or extended, or disconfirmed the shapes and structures of the world described by Charles Darwin in *The Origin of Species* (1859), while appropriate to the study of evolutionary science, occludes many of the key differences between geology and evolutionary biology in this period. While Levine, Beer, Sally Shuttleworth, Jonathan Smith, and a host of other critics focus on the narratives of earth history geology may have contributed to

nineteenth-century culture, none have paid attention to the particular ways in which many leading geologists actually repudiated narrative as an appropriate mode through which to think about the earth's past.³ The study of stratigraphy and the production of maps and surveys forcefully redirected geological attention from the causal relationships between geological events to a consideration of the structure and order of the earth's strata: this strategy conveniently avoided both rivalling the Biblical narrative of Creation and gave geology a powerful and exciting research programme, a means of transforming human understandings of the earth without falling into the pitfalls of eighteenth-century cosmological narratives of earth history which had speculated too quickly on geological phenomena and had been widely discredited by the beginning of the nineteenth century.

More importantly for this essay, literary critics working within the framework elucidated by Beer and Levine have been unable to register the importance of the material contexts of geology and the ways in which they enabled the science to penetrate many different discourses and social spaces. Indeed, the material culture of nineteenth-century geological science is one of the ways in which geological science can be clearly differentiated from evolutionary biology: as the historian Martin Rudwick has made clear, the most significant problem Darwin had to face from his critics was the lack of a material basis for his theory. 'Well aware that palaeontology [...] could alone supply direct positive evidence' for evolution, Darwin was equally well aware that 'it was precisely this positive evidence that palaeontology did *not* supply', that there was no direct fossil evidence for the variation of species.⁴ Jonathan Smith has recently argued that Darwin's efforts to express 'natural selection' in visual terms were in many ways attempts to represent the unrepresentable.⁵ 'Natural selection', 'uniformitarianism', or 'progression', for example, could not be picked up, handled, put on display, exchanged, dug up, bought or sold in the way that minerals, dinosaur bones, rocks and fossils could. Geology, with its layers of strata exposed in railway cuttings and cliff faces, could be seen (and felt) to be believed.

The materiality of Victorian geology meant that it could be rooted in practice as well as in high-level theorizing. It was therefore — at least in some of its cultural

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manifestations — accessible to those outside the elite inner core of the Geological Society of London to which Darwin and Lyell both belonged. It became standard rhetoric for the authors of popular geological textbooks and lectures in the nineteenth century to claim that geology was as open to the miner, the agriculturalist, the quarryman and the navy, as it was to the gentlemen savants of the scientific societies.⁶ In practice, both the direction geological science took and its interpretation of the rock and fossil records were more or less governed from the gentlemanly centre. Nonetheless, the fact that working- and middle-class men and women could collect fossils and attend geological lectures at Mechanics' Institutes or at provincial natural history societies, meant that the collation and value of scientific evidence, the meaning of that evidence in different social spheres and spaces, the ownership of geological ideas, the practices by which knowledge was produced, and the notion of what constituted publication, could vary widely. As Samuel Alberti has written, for example, provincial natural history societies could often function as 'emblems' of the 'cultural erudition' of the 'emerging bourgeoisie', to be considered 'alongside art galleries, libraries and gardens' as 'manifestations of civic pride, evidence of the sophistication of one town in contrast to its neighbours, the capital and the wider empire'. Such museums not only organised and revealed natural objects, but also delineated civic space and identity, as one regional museum sought to outdo another in a rival region, or to express the distinct identity (and therefore the scientific importance) of the specimens available within its particular geographical area. In their management of displays and of the donors, contributors and participants which made them possible, provincial museums and societies could also function as spaces in which inter-class relations could be fostered and defined, and spaces in which provincial and metropolitan values and identities were bartered and forged. Though Victorian geologists produced multiple accounts of the history of the earth, the science's proliferating material cultures were not so much focused on the unravelling of a long-dead past, as on shaping the geographical, social and political contours of the world the Victorians inhabited in the present.

This essay centres on Thomas Hardy and the fossil collector Gideon Mantell,

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two quite different provincial writers. In describing these two writers thus it responds to their mutual sensitivity to the concept of the provincial not only as a geographical region ‘as distinguished from the capital or chief seat of government’, but as a depreciated cultural category conceptualising the intellectual character of regions outside the metropolis as ‘parochial or narrow-minded; lacking in education, culture, or sophistication’ (*OED*). Both men spent time living in London in order to advance their professional careers — Hardy as an apprentice architect between 1862 and 1867, and Mantell in 1810 in order to qualify as a doctor and midwife and in 1838, after the breakdown of his family and medical practice in Brighton. And it is also true to say that both men would recognise the importance of the metropolis as an intellectual and cultural centre in their aspirant careers as poet and geologist. But both Hardy and Mantell had also grown up in somewhat modest circumstances in the provinces: Hardy as the son of a Dorset builder and a dairymaid, Mantell the son of middle-class, but dissenting and radical parents in Lewes, which made it impossible for him to attend the usual public schools or to go to university.⁷ And both men often felt their cultural isolation from the intellectual elites in the city — Hardy spent sixteen years as a Gothic draughtsman, talented but unable to rise above the level of an assistant; Mantell, as will be discussed below, was frequently embittered by his dealings with the metropolis and its scientific institutions. It is their mutual sensitivity to the construction of the metropolis as a cultural centre in the Victorian period, and their sensitivity to constructions of knowledge accumulated or experienced outside the metropolis as parochial or narrow-minded, which this essay seeks to examine.

This essay also centres on Hardy and Mantell’s interrelated encounters with, and textual representations of, geological objects and collections. It pays attention to the material cultures of landscape, place (both social and geographical), and of fossil collection and display, all of which were central to both these writers’ representations of geology and to their negotiation of provincial identity, politics, and representation, a view which has been obfuscated by the current emphasis on Darwin and on scientific law and narrative pattern. In paying attention to these writers in their provincial contexts and through their shared engagement in their material environments I also seek to

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gesture toward a more multivalent way of thinking about the kinds of authority invested in scientific, literary and other cultural texts and practices and the ways in which they might be related through their shared participation in, possession of, and descriptions of the material world. The fossil, a key geological material object, for example, clearly exists before it is a specimen to be housed in a collection, or becomes the object of a novelist's description. What the fossil means for the Victorian is dependent upon *both* the collections and the descriptions which are brought to bear on it, as well as on lectures, public debates, artistic representations, and a whole range of other practices and discourses which make it available as a cultural artefact. In examining the meanings of the material object as produced in tandem by a range of practices and discourses, rather than starting out from the disciplinary formations 'literature' and 'science', we are less likely to constrain ourselves to thinking within those disciplinary parameters, so differently-defined for the Victorians than for us. In so doing we are therefore more able to register the multiplicity of meanings proliferating around an object. Those meanings are not produced by bodies of knowledge such as 'geology' or 'the novel' but by individual historical actors with manifold interests and motivations, and they are bound by other material conditions, such as space (in this case, the provincial space), which may be shared and (re)produced by scientists and novelists (and artists and collectors and museum-builders and so on) alike. This essay will assess the ways in which the public imagining of the 'metropolitan' as not only a physically 'real' city but as an elite, cultured space, and the 'provincial' as its diametric opposite, was both produced and resisted by the traffic of geological objects and collectors from town to country and back again, and by the representation of that exchange in written texts.

It was with his third novel, *A Pair of Blue Eyes* (1873), that 'Hardy made his breakthrough with the critics', the novel being widely reviewed and well received.⁸ This is also the novel in which Hardy, according to at least one twenty-first century critic, 'found' his 'method'.⁹ During the composition of this novel the young Hardy broke from his sixteen-year career as an architect's assistant, a career whose prospects had been significantly hampered by condescension toward his 'provincial' status as the son of a Dorset stonemason, and became a metropolitan 'man of letters'. The second writer,

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Gideon Mantell, was a middle-class physician and fossil collector whose work on the Sussex coast in such books as *The Wonders of Geology* (1838) and *The Medals of Creation* (1848) was widely read in the Victorian period, going through multiple editions, and who is now best remembered for his identification and naming of such creatures as the iguanodon and the hylaeosaurus. The men are directly connected because, as Patricia Ingham has demonstrated, Hardy acquired a copy of the sixth edition of Mantell's *The Wonders of Geology* (1848) in 1858 from his friend Horace Moule, a copy which remained in his possession until his death and whose descriptions of the geological past may have been the source for Hardy's own contribution to Victorian geological writing in *A Pair*



Fig. 1 John Martin, *The Country of the Iguanodon*, 1838, used as frontispiece to Gideon Mantell's *The Wonders of Geology* (1838)

of Blue Eyes.¹⁰ The similarities between the two texts are particularly clear in the famous passage from Hardy's novel in which the dilettante protagonist Henry Knight slides down a cliff face and comes face to face with a fossil trilobite:

Time closed up like a fan before him. He saw himself at one extremity of the years, face to face with the beginning and all the intermediate centuries simultaneously. Fierce men, clothed in the hides of beasts, and carrying, for defence and attack, huge clubs and pointed spears, rose from the rock, like the phantoms before the doomed Macbeth. They lived in hollows, woods, and mud huts – perhaps in caves of the neighbouring rocks. Behind them stood an earlier band. No man was there. Huge elephantine forms, the mastodon, the hippopotamus, the tapir, antelopes of monstrous size, the megatherium, and the mylodon – all, for the moment, in juxtaposition. Farther back, and overlapped by these, were perched huge-billed birds and swinish creatures as large as horses. Still more shadowy were the sinister crocodilian outlines – alligators and other horrible reptiles, culminating in the colossal lizard, the iguanodon. Folded behind were dragon forms and clouds of flying reptiles: still underneath were fishy beings of lower

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development; and so on, till the life-time scenes of the fossil confronting him were a present and modern condition of things.¹¹

There are compelling similarities between the ‘Retrospect’ of geological time which Mantell elucidates after a lecture on the South-East of England and the passage quoted above from *A Pair of Blue Eyes*, as Ingham points out.¹² The ‘huge elephantine forms, the mastodon, the hippopotamus, the tapir, antelopes of monstrous size, the megatherium, and the mylodon’ (all of which are herbivorous) in Hardy’s text are like the ‘groups of elephants, mastodons, and other herbivorous animals of colossal magnitude’ in Mantell’s ‘Retrospect’.¹³ So too are the ‘sinister crocodilian outlines [...] culminating in the colossal lizard, the iguanodon’ very similar to Mantell’s description of the ‘Country of the Iguanodon’ (448), a dinosaur he had discovered and named. In both passages the phrase ‘dragon forms’ appears (447) (see **fig. 1**).

Indeed, critics frequently suspect that the dilettante, university-educated reviewer and ‘fair geologist’ Henry Knight, protagonist of *A Pair of Blue Eyes*, was based on Moule. Furthermore, they have often attributed the scene in chapter 18 of *Tess of the D’Urbervilles* (1892) in which Angel Clare is rebuked by his father for ordering an atheistic book to Hardy’s witnessing of a similar scene between Horace Moule and his own father, also an evangelical clergyman, over Moule’s purchase of *The Wonders*.¹⁴ Whether Moule was the template for Knight or for Clare, it is clear that when he was writing *A Pair of Blue Eyes* Moule’s ‘impact upon Hardy was immense’ as a friend, tutor and advisor. As Michael Millgate puts it, Moule was ‘handsome, charming, cultivated, scholarly, thoroughly at home in the glamorous worlds of the ancient universities and of literary London’, ‘a model of what’ Hardy himself, still a provincial architect but on the cusp of turning full-time ‘man of letters’, ‘most deeply wished to become’.¹⁵

In this light Hardy’s critics and biographers have interpreted Mantell’s book as an object, a gift gratefully received by the young, class-conscious aspirant from his socially-superior friend and mentor, and as a book which, having once been in the possession of the ‘charming, cultivated, scholarly’ Horace Moule, emblematised geology’s status as a discourse proper to the Victorian intellectual elite. Geology is

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registered in critical accounts of the novel, most notably including Andrew Radford's study *Thomas Hardy and the Survivals of Time*, as a discourse of the lettered and gentlemanly social sphere Hardy 'wished to become' a part of, and Mantell's text is treated as an authoritative account of the geological past indistinguishable from any other accounts by other geologists operating within different social spheres, with different forms of expertise, and who may have had different attitudes to geological objects and the spaces in which they were found, discussed, and displayed.¹⁶

But open up *The Wonders of the Geology* and the earth history it recounts is shot through with Mantell's arguments about the role of scientific politics in the reconstruction and interpretation of the past. Mantell co-opts his exposition of the geological past into a rhetorical defence against the hegemony of metropolitan scientific institutions and argues a case for the collection and display of the material objects of geology within the provincial setting in which they are discovered. It is important to note here that many leading members of the Geological Society, including Charles Lyell (at whose behest Mantell won the Society's most prestigious award, the Wollaston Medal, in 1834) were Mantell's firm friends. They regularly used and advertised his excellent fossil collection, and often attempted to help further his scientific career. But Mantell had also learned the hard way that the patronage of the scientific elite did not necessarily provide fair remuneration for his contributions to scientific knowledge. Frequently forced to give lectures for money rather than to devote himself to more sustained and specialist research, occasionally critical of upper-class collectors like Thomas Hawkins, whose ability to collate one of the best fossil collections in the world was rather dependent upon 'money than wit', as Mantell put it, Mantell became increasingly bitter that his scientific reputation did little to secure him the medical patients he so sorely needed in order to guarantee his financial survival.¹⁷ His difference in social and financial status from the gentlemen of the Geological Society determined the course of his scientific career. He was forced to write widely-selling summaries of geological knowledge, such as *The Wonders*, rather than specialist publications, and to open his collection of 20,000 geological specimens gathered from the Sussex coastline as a commercial museum, instead of maintaining it as a privately-

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owned research collection. The specific forms his work took — the commercial collection or the lecture series, rather than the multi-volume accumulation of researches — often threatened Mantell's ability to claim ownership of his scientific discoveries.¹⁸ The recognised channels for scientific success were never fully open to a man who could neither afford lengthy fieldwork excursions nor the gamble of expensive, specialist publications, even despite his widely-acknowledged successes in discovering the iguanodon and the hylaeosaurus. While he saw the Sussex Scientific and Literary Institution and Mantellian Museum he had collated in Brighton as the publication of his researches, a physical embodiment of his contribution to geological knowledge, it ultimately failed to perform this function. After several financial misfortunes he was forced to sell the collection to the British Museum. His prized Maidstone iguanodon was damaged in transit, and, horrifyingly, the entire collection was broken up and distributed among the other museum exhibits, destroying its status as evidence of the distinctiveness of Sussex geology and effectively eradicating evidence of Mantell's authorship of the collection and its contribution to scientific knowledge.¹⁹ While selling the collection secured him some financial gain, and while he had the support of many leading members of the Geological Society, nonetheless Mantell's dealings with the metropolis and the specific forms of knowledge it valued were often fraught with despair. As he was heard on one occasion to describe it, it was difficult not to see the trajectory of his career as an example of 'metropolitan prejudice against provincials'.²⁰

Mantell's response to this situation is most fully expressed in the 'Preface' included in the sixth edition of the *Wonders* which Hardy read. The preface expresses his hope that his collection's importance will be re-established in the British Museum, thanks Mantell's London friends for their help, but also laments both his failure to establish the County Museum on a permanent basis and its re-housing in the British Museum, a location Hardy regularly patronized during his years in London in the 1860s, the 'gloomy corridors' of which Henry Knight also walks through, 'abstractedly', at the end of *A Pair of Blue Eyes* (353).²¹ Mantell writes in the preface that his collection 'would have been of tenfold importance if located in the district whence it was derived, and whose geological structure it was designed to illustrate', and

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he writes bitterly that the collection ‘is now broken up, and dispersed through the cabinets of our National Institution’ (viii). This view clearly runs counter to the nationalising impulse embodied in the British Museum, which collected and accumulated data from a wide variety of dispersed locations in the provinces and the colonies and attempted to turn them into a coherent, nationally-organised totality of which the metropolis itself was seen as the figurehead. For Mantell, however, the ‘National Institution’ de-emphasised the distinctiveness of individual regions and the singularity of the evidences found there. It substituted for that distinctiveness an overarching national or even global history in which evidence may be drawn from a wide range of geographical sources without acknowledging the local context in which those sources were found or from which they may derive alternative meanings. It also removed the traces of Mantell’s authorship of his collection. As such, London emerges in this passage as a place in which knowledge is ‘broken up and dispersed’ rather than a place in which knowledge is accumulated and given meaning.

This politics inflects the ‘Retrospect’ Mantell produces at the end of the first volume of the *Wonders* which Hardy used as a source for *A Pair of Blue Eyes*. The ‘Retrospect’ does not describe an all-encompassing geological history of the earth. Instead it is specifically identified as the particular geological history of ‘the Sussex coast’, and it culminates in a description of Brighton’s transformation from ‘the Country of the Iguanodon’ to a fishing village, and finally into ‘a beautiful city [...] with its palace, its temples, and its thousand edifices, and its streets teeming with a busy population in the highest state of civilization’ (449). This urban utopia provocatively re-imagines Brighton as a city (it would not become a city for well over a century) in terms which claim for it the centrality and status of a metropolis: ‘the resort of the nobles of the land, the residence of the monarch of a mighty empire’ (449). This counter-attempt to displace the values of the metropolis and its elites and to resituate scientific authority in the provinces derives its power from its ability to house ‘nobles’ and ‘monarch[s]’ and from its equal worthiness with London as a seat of power and tradition built upon an equally long and illustrious past which Mantell’s history makes legible. In this document Mantell uses his status as a provincial scientist as a virtue rather than a

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drawback; his intimate knowledge of the area proves his credentials as an empiricist scientist, restricting his conclusions to data he has observed firsthand in a region with which he is personally acquainted and over which he therefore carries special authority. Readers of Mantell's text could not fail to register his 'Retrospect' as a political statement connected to a particular place even as it also claims to be a broad geological history of the earth derived from firsthand observations.

In *A Pair of Blue Eyes*, as in Mantell's text, the opposition between London and the world outside the city, and an acute sensitivity to the politics of knowledge embedded in attitudes towards those places, is central. In fact, it generates the plot of the novel. So when the heroine Elfride Swancourt still believes her lover Stephen to be a gentleman, she rationalises one of his many absences in terms of the 1850s craze for seashore collecting partly attributable to Philip Henry Gosse's *A Naturalist's Rambles on the Devonshire Coast* (1853).²² She 'remembered', the narrator tells us, 'that several tourists were haunting the coast at this season, and that Stephen might have chosen to do likewise' (50). The reader is already aware that Stephen's social background is something less than illustrious, and this explanation is only one in a chain of such ungrounded assumptions that Elfride makes about Stephen's class, which the reader already suspects, and which depend on her construction of him as simultaneously metropolitan and professional, again denoting the classed nature of the imaginative construction of 'metropolitan' and 'provincial' spaces in Victorian culture. Indeed, Stephen's acceptance in the Swancourt household is partly predicated on his acquaintance with the metropolitan world and on the assumption that this not only makes him intriguing to the Swancourts, isolated in Cornwall, but also implicitly makes him a member of a shared social network which transcends regional boundaries and finds expression in the metropolis: 'all you town men have holidays like schoolboys' jokes the Reverend affectionately, asking him to return for another visit (36). Upon the revelation of his true past as the son of a local mason and a dairymaid Elfride is shocked 'to think *you*, the London visitor, the town man, should have been born here' (76). The irony of the assumption that Stephen could be a natural-historical tourist depends on (and assumes) the reader's recognition of natural history as a fashionable pursuit

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undertaken by urbane metropolitan holidaymakers, a pursuit which would have been unavailable to anybody who, like Stephen, grew up as the son of a stonemason in the rural countryside, has learned Greek only by correspondence and who has never learned to ride a horse. Tourism constructs the Cornish landscape as a site available for the consumption of the metropolitan elite, experienced differently by that elite and meaning something different to the people who actually live, and work, within it.

Henry Knight, however, *is* a scientific tourist. Following his initial rejection by Elfride Swancourt he ‘ceased now to remain in the house for long hours together as before, but made it a centre for antiquarian and geological excursions in the neighbourhood’ (200). Though he also originates from Cornwall, as a reviewer he becomes a stereotype of the Victorian tourist-collector, able to make ‘antiquarian and geological excursions’ in his own locality. He was university-educated, published in a quarterly metropolitan review and spends several months during the course of the novel travelling through Ireland, France and Italy as a cultured tourist. As a result, he possesses a form of cultured consciousness which allows him a different vantage point on the ‘natural’ world he grew up in to that of its poorer inhabitants. It was his intermediary point between these two positions that was such a source of frustration to Mantell. Always concerned about money, not having been educated at university, he could not have the intellectual and financial freedoms of a Knight, and yet he too was interested in the scientific particularities of his local region in a way which was, to his dismay, lost on many of the inhabitants of Brighton.

Knight’s geological ‘excursions’ in Cornwall are of a piece with the marine aquarium he keeps in the library of his home in Bede’s Inn, London, ‘a dull parallelepipedon enough for living creatures at most hours of the day’ which lights up only ‘for a few minutes in the evening’. It sits alongside ‘book-shelves ordinary and extraordinary’ and ‘casts, statuettes, medallions, and plaques of various descriptions, picked up by the owner in his wanderings through France and Italy’ (129). In this way it is linked with urbane, university-educated, relatively wealthy culture and to the kinds of subjects written up for publication in periodicals like the fictional *The Present*, a periodical based in the metropolis but read in Cornwall by readers like Elfride, who at

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the start of the novel has never been to London. The aquarium's cultural capital, its ability to denote and confer status on its owner, and its engagement in a particular set of cultural values (erudition, leisured travel, the subduing and packaging of nature for the cultivated eye) is made clear by its position in a library which is a show of academic prowess and gentlemanly activity. Socially it links Knight with Reverend Swancourt, who also owns an aquarium and collects natural-history specimens, all of which also sit in his 'study', alongside books on Greek and Roman history (27). In these references Hardy ironises the frequent oppositions his characters pose between town and country, province and metropolis, by revealing the pervasiveness of the elite construction of the natural world and of metropolitan intellectual fashions even in the far-flung corners of the English landscape.

This, emphatically, is not the same kind of collecting culture to which Mantell belongs, being essentially touristic rather than academic. This is a culture of collecting which transforms the landscape into a metropolitan playground — which, in fact, *makes* that landscape 'provincial' in the sense that it registers it as something other, something outside, the cultural centre of London. That very concept of provinciality, as Hardy's novel powerfully enacts, depends upon an interactive relationship between the two sites. Elfride and her father, for example, gentrified in the sense that they do not have to work in the landscape in which they live, respond to their landscape at least partly through the eyes of the metropolitan texts whose ideas they constantly ape. Most importantly, the natural-historical objects which circulate through the text of *A Pair of Blue Eyes* are frequently absorbed into the mediating and interpretative world of print associated with London through Knight's metropolitan reviewing and Elfride's forays into the London world of publishing as the author of a romance novel. Both Knight and Swancourt house their specimens in studies and libraries; similarly, Elfride, who has the masculine freedom to roam around the countryside on her horse carries a contraption for carrying both natural-historical specimens and, revealingly, light fiction. It is this contraption she uses to stash her things in as she attempts to elope with Stephen. The materiality of the natural landscape is frequently displaced into representation in this way by the characters of the novel, co-opted into the world of print — of fiction, or the periodical.

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In fact, natural-historical objects barely exist in the novel at all without these multiplying interpretative frames: natural history is tourism, it is collecting and hoarding, it is review-writing, it is an opportunity for study, it is a veil for sexual transgression. The material objects of geology and natural history do not exist in *A Pair of Blue Eyes* without the contraptions and texts which house them and give them meaning, so that social practices bring the natural world into existence as a series of objects to which are attached a variety of conflicting values. Without those texts, networks and practices, these objects would remain blank, mute, and meaningless. So, implicitly, the seemingly isolated Cornish world does not exist without those texts, networks, and practices which construct it as such. As it emerges in Hardy's novel, the Cornish landscape cannot be imagined as provincial in the senses of insularity, backward-lookingness, or isolation from the city: in fact, the material landscape itself is marked by the social practices, texts and cultures of London. At the same time, however, the landscape also becomes a cultural artefact in this way, available for public consumption and liable to interpretations produced by the lettered world centring in the metropolis.

This embeddedness of the material object in the spaces in which it is found or displayed, and in the particular cultural modes and discourses through which it is given meaning, means that all too frequently the practices of natural history bring not knowledge in *A Pair of Blue Eyes*, but deferral or obfuscation. This ironic parody of scientific knowledge repeatedly plays out on the level of plot: Elfride hides the secret of her elopement in her collecting bag, and she misinterprets her lover's social status through recourse to the language of natural history. The practical circumstances of natural-history collecting thereby form a veil for Elfride's deception and for her act of sexual transgression, just as her earlier assumption that Stephen was a natural-historical tourist temporarily blinded her to his social origins and perpetuated her false suspicion that he was having an affair with a local servant. Similarly Knight's geological excursions enable him to avoid Elfride and to delay his confrontation of the reasons for her rejection, a delay which carries fatal and tragic consequences. The act of collecting the material objects of natural history and the contraptions devised to undertake it create

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the opportunity for such obfuscations of reality in *A Pair of Blue Eyes*. Hardy's ironic representations of the practices of natural history repeatedly construct scientific knowledge in this novel as a misappropriation of the material landscape by the elite, making it a vehicle rather of misunderstanding than of knowledge.

Hardy's critical response to the knowledge produced (and muddled) in this way has led Radford, in the only extended treatment of geology in *A Pair of Blue Eyes*, to see Knight's geological pretensions as representing his cool disinterestedness. According to Radford, Knight is Hardy's 'first major study in Victorian dilettantism' and a 'blueprint for [Angel] Clare: unyieldingly self-righteous, coldly idealistic, with an "invincible objection to be any but the first comer in a woman's heart" ', always 'converting the hectic disorder of lived experience into cool explanatory prose' for the metropolitan review he writes for, ironically-entitled *The Present*.²³ Radford draws on the most famous passage in the cliff scene for this reading:

Opposite Knight's eyes was an imbedded fossil, standing forth in low relief from the rock. It was a creature with eyes. The eyes, dead and turned to stone, were even now regarding him. It was one of the early crustaceans called Trilobites. Separated by millions of years in their lives, Knight and this underling seemed to have met in their death. It was the single instance within reach of his vision of anything that had ever been alive and had had a body to save, as he himself had now.

The creature represented but a low type of animal existence, for never in their vernal years had the plains indicated by those numberless slaty layers been traversed by an intelligence worthy of the name [...] The immense lapses of time each formation represented had known nothing of the dignity of man. They were grand times, but they were mean times too, and mean were their relics. He was to be with the small in his death (214-15).

For Radford 'it is appropriate that Knight, a fashionable member of the London *beau-monde* and an amateur geologist, should have to contemplate being "with the small in his death" '. Knight's twentieth- and twenty-first-century reception as an unsympathetic figure who first subdues and then punishes Elfride for her sexual history — a kiss and an abandoned elopement — is predicated on this passage and its distaste for the implicit connection that he 'had a body to save' like the 'underling', the 'trilobite', or the connection of his own powerful mind with the 'slaty layers' occupied by no 'intelligence worthy of the name'.²⁴ The passages certainly suggest a connection

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between the 'natural' history of the geological past, the 'mean times' of the trilobite, and the naturalness of the sexual history of the female protagonist. The 'vast stratification of blackish-gray slate' on which Knight hangs is 'revealed to its backbone and marrow' (205), its 'masses of black strata' 'denuded from the sides' of an 'igneous protrusion' of 'quartz' on which Knight finds temporary respite (211). These references to the geological process of denudation, the erosion of several layers down to the bare rock, revealing 'backbone and marrow' prefigure Elfride's 'denudation' in the act of rescue, in which she strips off most of her clothes in order to form a rope with which to haul Knight to safety (see **fig. 2**). Framing the awakening of sexual knowledge within geological discourse, Hardy ironises the traditional connection of female sexuality with



Fig. 2 James Abbott Pasquier, 'Elfride Attempts to Help Knight', illustration from Thomas Hardy, *A Pair of Blue Eyes*, first published *Tinsley's Magazine* 16 (February 1873), p. 208

innocence and purity, with the history-less world of Eden corrupted by Eve's transgression. Female sexuality is not without its history and, moreover, a female sexuality with a history is represented as 'natural', analogous to and complicit with the 'natural' world in which there is always another layer which can be eroded, another past to be discovered. At the same time, nonetheless, the ironic references to denudation suggest the lack of a firm ground on which analysis or interpretation may rest: if there is always another layer to be eroded, there is no single interpretation of the natural object (be it woman, rock or fossil) available to the observer. The material objects of the natural world constantly slip in and out of contexts and

histories, always preceded by another layer of meanings, never fully analysable even by the scientific or cultured eye.

As such Hardy's literary pun on the geological term 'denudation' in his

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representation of a rapidly denuding Elfride parodies the ‘natural’ world by making it dependent for meaning upon the self-conscious strategies of literary representation. He has not escaped the trap he sets for Knight and for those characters aping the metropolis and its cultured values, for he too can only make his point through fiction, through linguistic play. Indeed, neither have the working-class inhabitants of this provincial world, whose class excludes them from metropolitan culture and who are derogatorily viewed as illiterate, ahistorical, and rustic:

To those hardy weather-beaten individuals who pass the greater part of their days and nights out-of-doors, Nature seems to have moods in other than a poetical sense: moods literally and really – predilections for certain deeds at certain times, without any apparent law to govern or season to account for them. They read her as a person with a curious temper [...] scattering heartless severities or overwhelming kindnesses in lawless caprice [...]

This way of thinking had been absurd to Knight, but he began to adopt it now (215).

In this passage Knight’s metropolitan condescension of this animistic ‘way of thinking’, hitherto ‘absurd’ to him in his encounters with the natural world from the elite and indoor spaces of his rooms at Bede’s Inn or at the British Museum, is subverted as he experiences the ‘out-of-doors’ working-class and ‘provincial’ form of encounter with nature. This derided ‘provincial’ perspective — provincial because uncultured, uneducated, insular — is interesting because it is presented as a form of subjection: the ‘weather-worn series of jagged edges’ correspond to the ‘weather-beaten individuals’, nature applying its forces indiscriminately to human being and inanimate rock alike. Subject to the same processes as the cliffs, these people are imagined as subjected to, indeed part of, the natural world and unable, therefore, to objectify it with the detached gaze of the scientist. Though this is how Knight sees it, in fact Hardy’s description of the ‘provincial’ viewpoint presents it as equally mediated as Knight’s own view: not only is nature *both* ‘poetical’ and ‘literal’ but ‘they *read* her as a person with a curious temper’ (my emphasis). This nature, though it is a nature physically experienced by the provincial Cornish inhabitants, remains a nature transcribed and interpreted, rather than unconsciously and illiterately understood. So it is not merely Knight or the metropolitan world which consciously ‘reads’ and reshapes the physical landscape and its

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imaginative meaning — Hardy does it too, and so do his ‘weather-beaten’ farmers and ‘provincials’. No singular interpretation can make available the meanings of a natural object. Instead, its meanings are produced in and of the spaces in which it is found, displayed, and interpreted, and through the encounter of those spaces and the different forms of knowledge they embody.

Hardy uses the embeddedness of the geological object in the social practices which give it meaning in order to articulate the value of provincial forms of knowledge. Though he stresses the incompleteness of *all* human attempts at understanding, in doing so he is able to argue that the provincial as well as the metropolitan has a purchase on the ways in which we might come to know nature. The image of the weather-beaten individuals and the weather-worn rocks, however, also signals a point of optimism. It gestures toward a characteristically Hardyan visual trope, the tableau, and one which comes to play an important part in Hardy’s representation of Cornish geology and its role in producing both physical and conceptual (or ‘literal’ and ‘poetic’) spaces such as the ‘provincial’. In a preface added to the novel in 1895 Hardy suggests another image of complementarity between the human world and the landscape as an interpretative frame through which to read the novel. ‘The following chapters’, he explains:

... were written at a time when the craze for indiscriminate church-restoration had just reached the remotest nooks of western England, where the wild and tragic features of the coast had long combined in perfect harmony with the crude Gothic Art of the ecclesiastical buildings scattered along it, throwing into extraordinary discord all architectural attempts at newness there. To restore the grey carcasses of a mediaevalism whose spirit had fled seemed a not less incongruous act than to set about renovating the adjoining crags themselves.²⁵

Hardy’s distaste for restorations seeking to reproduce the unrecoverable ‘medievalism’ of a decaying edifice meant that he saw such projects as obliterating the value of buildings as documentation not of historical moments but of locally-specific historical processes. As he wrote in his autobiography, ‘this shortcoming of the most ancient architecture by comparison with geology was a consideration that frequently worried Hardy when measuring and drawing old Norman and other early buildings, just as he had been troubled by [...] the thought that Greek literature had been at the mercy

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of dialects'.²⁶ In the churchyard of *A Pair of Blue Eyes* we see the signs of the intrusion of metropolitan 'newness' in the tomb of Elfride's dead admirer Jethway, 'the white stone in which it was hewn having a singular weirdness amid the dark blue slabs from local quarries, of which the whole remaining gravestones were formed' (235). Such fashionable restorations bulldoze local idiosyncrasies into a flatter, more uniform narrative imposed from the centre — much as Mantell saw the British Museum doing to his Sussex-based collections. And like Mantell's projection of a geological history made legible by its situation in a particular and well-defined geographical location, Hardy's preference for the 'dark blue slabs from local quarries' argues for the preservation of the material object — the rock, the fossil — in the particular context in which it is found. The incommensurable 'weirdness' of the white stone whose provenance is unknown testifies to the intrusion of 'newness' in the landscape, the breakdown of a visible connection between people, places, and their physical environments. 'Craggs', churches, tombstones, and weather-beaten people, subject to the same forces of nature, gradually produce a single aesthetic vision in which all take on the characteristics of one another. The geological language of decay and denudation, the sensitivity to fossils, rocks and quarried slate, enables Hardy to envision a rural space which is not atemporal or outside of culture, but a space in which the material objects of history sit, like Mantell's lost Sussex collection, in the local contexts in which they were found, making history visible and comprehensible. For Hardy this is a form of history under threat from the breakneck speeds of urban modernity.

Both Hardy and Mantell seize upon the geological material object for its hermeneutic instability. They play upon the multiple possible meanings of the object — its availability for different interpretations by different social groups and in different geographical settings — in order to make claims for the importance of their own work and its situation outside the perceived cultural centre of the metropolis. In some senses both men appropriate the terms of the metropolis and its lettered culture for themselves: Mantell's Brighton is a glittering metropolis fit for the nobility; Hardy's Cornwall, though invaded by metropolitan fashions and tastes, produces its own rival claims to the meaning and interpretation of the natural world which might not be thoroughly

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‘scientific’ but which are equally culturally valid. As such, both men continue to register the city as vibrant and dynamic, central to the arbitration of intellectual culture. But for both men, too, the local, or the provincial, is a form of knowledge itself under threat — not from the inevitable movement of history, but from the hegemonic practices of the intellectual elite and from metropolitan blindness to provincial culture. As such they are acutely sensitive to the concept of the provincial not merely as a geographical space outside of London but as a political category bartered through representations of rural regions as liminal spaces existing outside of culture. For both men rocks and fossils embody ‘a spirit that has fled’ and the inevitable losses incurred in the momentum of history. But they also embody powerful arguments for the ways in which knowledge is constituted by the spaces and practices from which it emerges, for the importance of the provincial context, of encounter with the material object in its provincial setting, and of making that history in some measure knowable to the modern observer. Through the representation of the traffic of geological objects in fictional, or (in Mantell’s ‘Retrospect’) semi-fictional writing, Hardy and Mantell reconceptualise the Victorian imagination of the provincial landscape and of the forms of knowledge embedded within its rocks. Science, in these texts, does not simply produce ahistorical laws, or incontrovertible patterns, by which experience might be interpreted. In its interpretation of the material objects of the natural world it also intervenes in the historical, contingent, politically-motivated concerns of the present.

Endnotes:

¹ Dennis R. Dean, ‘“Through Science to Despair”: Geology and the Victorians’, in *Victorian Science and Victorian Values: Literary Perspectives*, ed. by James Paradis and Thomas Postlewait (Rutgers University Press: New Brunswick, New Jersey, 1985), pp. 111-36, (p. 111).

² Key examples (from many) of this focus on such patterns are Gillian Beer, *Darwin’s Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, (London: Routledge & Kegan Paul, 1983); George Levine, *Darwin and the Novelists: Patterns of Science in Victorian Fiction* (Cambridge, MA: Harvard University Press, 1988); Sally Shuttleworth, *George Eliot and Nineteenth-Century Science: The Make-Believe of a Beginning* (Cambridge: Cambridge University Press, 1984); and Jonathan Smith, *Fact and Feeling: Baconian Science and the Nineteenth-Century Literary Imagination*,

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(Madison: University of Wisconsin, 1994). For the classic statements on stratigraphy see James Secord, *Controversy in Victorian Geology: The Cambrian-Silurian Dispute* (Princeton: Princeton University Press, 1986), and Martin Rudwick, *The Great Devonian Controversy: The Shaping of Scientific Knowledge among Gentlemanly Specialists* (Chicago: University of Chicago Press, 1985). Quotation from Rudwick, *Great Devonian*, p. 46.

³ Shuttleworth, *George Eliot and Nineteenth-Century Science*; Smith, *Fact and Feeling*.

⁴ Martin Rudwick, *The Meaning of Fossils: Episodes in the History of Palaeontology*, 2nd edn (Chicago: University of Chicago Press, 1985), pp. 235, 235-36.

⁵ Jonathan Smith, *Charles Darwin and Victorian Visual Culture* (Cambridge: Cambridge University Press, 2006).

⁶ See, for an example in a widely-selling textbook of the period, David Page, *Advanced Text-book of Geology: Descriptive and Industrial* (Edinburgh: Blackwood, 1956), p. 289.

⁷ See Dennis R. Dean, *Gideon Mantell and the Discovery of Dinosaurs* (Cambridge: Cambridge University Press, 1999), pp. 9-10.

⁸ Charles P. C. Pettit, 'Merely a Good Hand at a Serial? From *A Pair of Blue Eyes* to *Far from the Madding Crowd*', in *The Achievement of Thomas Hardy*, ed. by Phillip Mallett (Basingstoke: Macmillan, 2000), pp. 1-21 (p. 4).

⁹ Michael Irwin, *Reading Hardy's Landscapes* (Basingstoke: Macmillan, 2000), p. 54.

¹⁰ Patricia Ingham, 'Hardy and the Wonders of Geology', *The Review of English Studies*, 31 (1980), 59-64.

¹¹ Thomas Hardy, *A Pair of Blue Eyes* (London: Penguin, 1998), p. 214. This edition has been used because it is the only modern edition to represent the first publication of the book in volume form. All further references will be cited parenthetically in the text.

¹² Ingham, 'Hardy and The Wonders of Geology'.

¹³ Gideon Mantell, *The Wonders of Geology; or, A Familiar Exposition of Geological Phenomena*, 6th edn, (London: Henry G. Bohn, 1848), II, p. 448. Further references are cited parenthetically in the text.

¹⁴ Michael Millgate, *Thomas Hardy: A Biography* (Oxford: Oxford University Press, 1982), p. 68.

¹⁵ Millgate, p. 68.

¹⁶ Andrew Radford, 'The Victorian Dilettante and *A Pair of Blue Eyes*', *Thomas Hardy Year Book* (Guernsey: Toucan Press, 2002), 5-19 (pp. 5, 9). This chapter is also reprinted as part of chapter two in Andrew Radford, *Thomas Hardy and the Survivals of Time* (Aldershot: Ashgate, 2003), pp. 34-65.

¹⁷ Mantell, in Dean, *Gideon Mantell*, p. 139.

¹⁸ This biographical material is heavily indebted to Dean's *Gideon Mantell*.

¹⁹ For an account of Mantell's mistreatment by Owen see Deborah Cadbury, *The Dinosaur Hunters: A Study of Scientific Rivalry and the Discovery of the Prehistoric World* (London: Fourth Estate, 2001).

²⁰ Dean, *Gideon Mantell*, p. 100.

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²¹ Mantell, *The Wonders of Geology*, pp. vii-ix.

²² Philip Henry Gosse, *A Naturalist's Rambles on the Devonshire Coast* (London: J. Van Voorst, 1853).

²³ Radford, pp. 5, 9.

²⁴ For an account of this twentieth-century reception see Pamela Dalziel, 'Introduction', in *A Pair of Blue Eyes*, ed. by Pamela Dalziel (London: Penguin, 1998).

²⁵ Thomas Hardy, 'Preface', in *A Pair of Blue Eyes*, ed. by Alan Manford (Oxford: Oxford University Press, 2005), pp. 3-4 (p. 3).

²⁶ Thomas Hardy, *The Life and Work of Thomas Hardy* ed. by Michael Millgate (London: Macmillan, 1984), p. 96.